

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Conditional Major/Synthetic Minor Proposed No. F-02-016

KENTUCKY ALUMINUM PROCESSORS

RUSSELLVILLE, KY.

October 25, 2002

BABAK FAKHARPOUR

Log #54333

SOURCE DESCRIPTION:

Kentucky Aluminum Processors (KAP) submitted an application to construct/operate a secondary aluminum processing plant. This plant is to be built adjacent to Logan Aluminum in Logan County. The plant will be composed of a slow speed shredder, high-speed shredder, two rotary melting furnaces and one holding/melting furnace. The rotary furnaces (emission points 01, and 02), are each rated at 20 MMBTU/hour, and the holding/melting furnace (emission point 03) is 24 MMBTU/hour. The company will bring in scrap aluminum (used beverage cans, lithographic plates, chips, medical tubes, painted siding) for smelting in a rotary furnace. Before the aluminum scrap is charged to the furnaces, it will go to the shredder for removal of any foreign metals and it will be staged (the shredder is located inside a building and the emissions will be controlled by a single 30000 cfm baghouse). The emissions from the furnaces are captured by a high canopy hood and controlled by exhaust stream lime injection systems (90% control efficiency) and 3 baghouses (99% control efficiency). The furnaces use natural gas fuel and no.2 fuel oil as a backup fuel. Fluxing is performed with chloride-based flux salts. The molten aluminum is poured into crucibles and cast into ingots. The slag or salt-cake (05) generated within the furnaces is cooled and stored within the building before being sent to an approved landfill. The particulate emissions from crucible cleaning, salt-cake cooling and load-out operation will be ducted to a 30000 cfm baghouse. Emissions from the road way, and the Low-Speed Shredder are insignificant activities.

COMMENTS:

On March 26, 2002, the Division received additional information from KAP addressing the Division's question about verification that KAP will be a separate entity, and not a support facility for Logan Aluminum, Inc. The Division disagrees with the arguments presented because KAP is in the same major SIC group 33; is adjacent; and is in fact controlled by Logan Aluminum in that their entire output is received by Logan, and the amount of output is dictated by Logan's needs. However, the Division has determined that KAP is a separate project for PSD purposes due to the length of time separating the two projects.

Applicable regulations are 401 KAR 52:030 – Federally-enforceable permits for non-major sources, 401 KAR 59:010 – New process operations, 401 KAR 63:010- Fugitive emissions, 401 KAR 63:020- Potentially hazardous matter or toxic substances, 40 CFR 63 Subpart RRR- National emissions standard for hazardous air pollutants for secondary aluminum production.

EMISSION AND OPERATING CAPS DESCRIPTION:

To meet 59:010 allowable, the control equipment must be in operation. KAP has self-imposed a plant wide VOC limit of 95 tons/year, source-wide HCl limit of 9.5 tons/year, and shall not melt more than 87600 tons of scrap per year to avoid major source status. D/F emissions shall not exceed the limits specified in the applicable regulations for each group 1 furnace and each SAPU.

OPERATIONAL FLEXIBILITY:

None

PERIODIC MONITORING:

Periodic monitoring requirements are as follow:

1. The permittee assures compliance with the visible emissions from each stack on a monthly basis by performing a quantitative analysis. If visible emissions are noted a Reference Method 9 is to be preformed.
2. The permittee assures compliance with the particulate matter emission standard by calculating the emissions as described in the permit.
3. The types and monthly amounts of aluminum feed to rotary furnace.
4. The types and monthly amounts of flux salt throughput.
5. The applicable periodic monitoring requirements in 40 CFR 63 Subpart RRR §63.1510.
6. The monthly hours of operation of each emission point.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.